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# Reskilling Staff for Digital Libraries

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**Abstract.** In academic libraries, the digital library world has had a profound impact on staffing. Academic libraries are facing huge pressure on their staffing levels at a time when digital libraries are being introduced. Digital libraries cannot be divorced from ordinary libraries. What skills do traditional librarians need? There is little in the literature on training for staffing for digital libraries. Consequently, evidence from a recent PhD gleaned from research interviews of these digital libraries case studies is included in this paper. This research uncovered a variety of different management and organizational issues and revealed the large cost of personnel in the implementation and maintenance of digital libraries

## 1 Introduction

As part of a study on the impact of XML (Extensible Markup Language) in digital library development, studies were undertaken on three digital library initiatives, which were chosen because of their size and being examples in the global digital library community. These studies included research interviews conducted during visits in September 2002 to three projects which were in different types of library. The Perseus Digital Library (PDL) was selected as an example of a research and development testbed. The University of Michigan Digital Library Services (DLS) represented an academic library (In June 2003 the DLS was renamed Library Information Technology). Its mission is to support a virtual learning environment and preserve campus-wide materials for long-term access. The Library of Congress (LC) National Digital Library Program (NDLP) was taken as an example of a national library project.

## 2 Expectations for Digital Library Staff

There is much more to digitization than scanning data. The non-technical challenges encountered by digital library developers are proving to be elusive, complex and profound. Institutions are not looking for people doing routine work but for those who have knowledge of future trends in their professions. Therefore, our view is that librarians in general, following the lead of those in the Library of Congress, are wise to see the future in XML. The results of our investigations of real world library posts discussed in the following paragraphs support our vision of this.

We did an investigation using Web job listings in the UK, the US and Taiwan. We targeted academic librarian jobs and computing jobs in the academic sector. Further-

more, we investigated whether in those three countries XML was part of the curriculum in library schools and if there were reports or activities related to XML from the library associations in the three countries.

We found few jobs in librarianship compared with computing mentioned XML as a requirement.

We discovered that library schools have not recognized the need for XML skills. According to their course descriptions, in the UK, only one out of 8 library schools provided an XML course; in the US, two out of 50 library schools provided an XML course; in Taiwan, one out of 9 library schools provides an XML course. On the other hand, the concept of XML has been introduced into courses, such as Electronic Publishing, Document Engineering, and Technologies in Web Content Management.

As far as professional associations are concerned, in the UK, the Chartered Institute of Library and Information Professionals (CILIP) has been announcing more training workshops on library and information technology in which XML-related initiatives such as markup language, schema, Resource Description Framework (RDF) are among the topics. In the US, since 2000 the Library and Information Technology Association at ALA has selected XML related initiatives such as MARC XML as annual top technology trends. The Library Association of the Republic of China in Taiwan provides irregular XML training courses.

To conclude our investigation, although XML has not been recognized as a core skill in library jobs or as part of the core programme in library schools, nevertheless, library associations with their responsibility for professional development have identified XML as an important technology trend that needs to be monitored carefully. We suggest that it would be advantageous for librarians to have knowledge of XML even if they do not work directly with XML; and library schools could provide selective courses on XML.

Staff retention is important and it is necessary to have a good career structure in place, which is going to be difficult in most environments where academic digital libraries are being developed.

XML is a new technology for the Web likely to play its part in every library operation. Librarians in the future will play a mediating role between the computing professions and users. Knowledge of current standards and newly emerging technology trends such as XML will be a beneficial skill for librarians while looking for jobs either in the library sector or information-related sectors. Library schools could therefore contribute to the acquisition of this professional knowledge by covering these subject materials in their curriculum. As Hey suggested, librarians should be aware of the technological trends and be prepared, in order to compete and survive in the ever-changing environment.

### 3 Future Studies

The studies were all of libraries in the US since when we began our research there were few developments elsewhere. We have detected from personal experience in the UK and Asia that in some areas there is opposition in various levels of the profession to librarians becoming more involved in the management and technical activities associated with digital libraries. Senior librarians may feel deskilled in face of a digital library whether it be in developing it or being a user of it or assisting library users to use it. So, there are many reasons why this may have resulted in other groups such as computing professions stepping in. Clearly, there is ample material for a further study.